

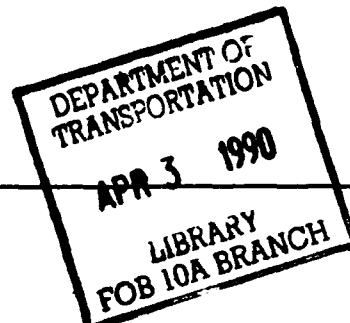


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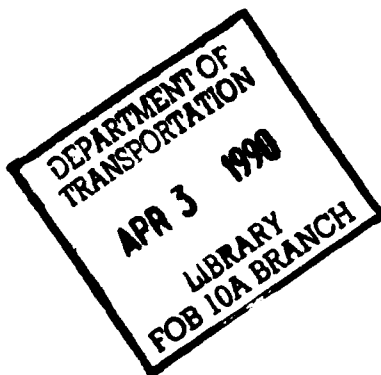
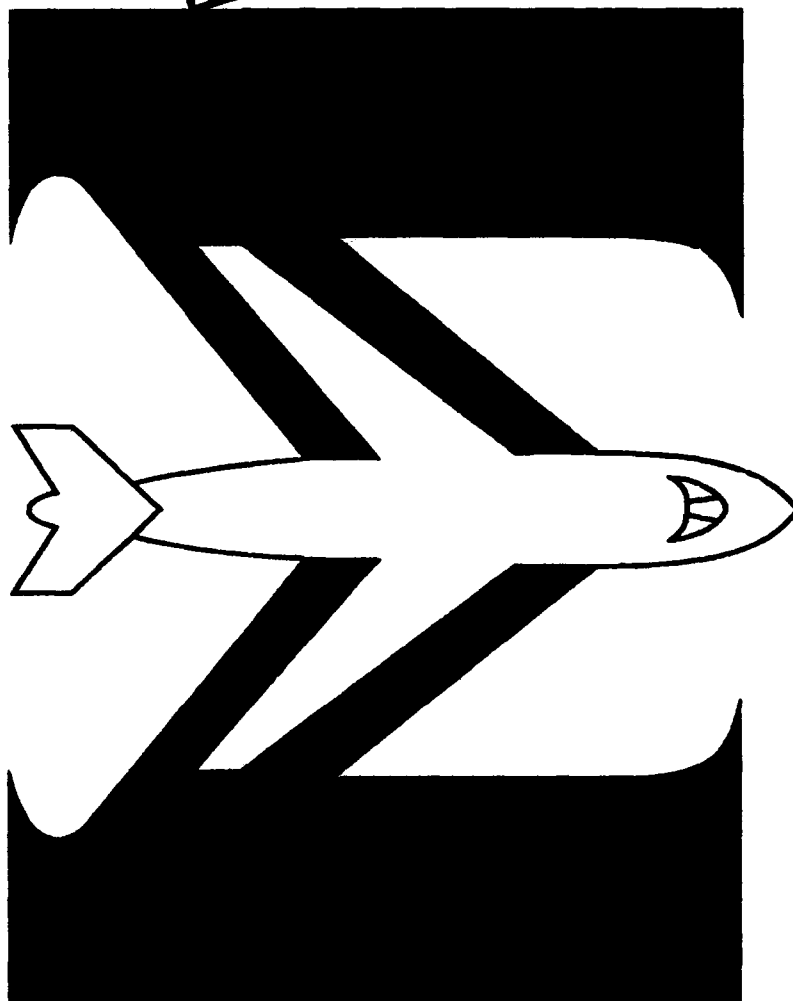
# U.S. CIVIL AIRMEN STATISTICS

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Calendar Year 1989

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**FAA Statistical Handbook of Aviation** is a convenient source for historical data. It presents statistical information pertaining to the Federal Aviation Administration, the National Airspace System, Airports, Airport Activity, U.S. Civil Air Carrier Fleet, U.S. Civil Air Carrier Operating Data, Airmen, General Aviation Aircraft, Aircraft Accidents, Aeronautical Production & Import/Export.

Reporting period:	Calendar Year
Latest edition:	1987 data
Order from:	U.S. Government Printing Office or National Technical Information Service
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Person to contact:	Patricia Beardsley

**U.S. Civil Airmen Statistics** is an annual study of detailed airmen statistics. It contains calendar year statistics on pilot and nonpilots and the number of certificates issued.

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Person to contact:	Patricia Carter

**Census of U.S. Civil Aircraft** is an annual publication that includes statistical data on the registered civil fleet, air carrier aircraft, and general aviation aircraft—both registered and active, detailed reports for general aviation aircraft by owner's state and county, and registered aircraft by make and model.

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**FAA Air Traffic Activity** furnishes terminal and en route air traffic activity information (e.g., takeoffs & landings, flight plans filed) of the National Airspace System. The data is collected, compiled from the FAA-operated Airport Traffic Control Towers, Air Route Traffic Control Centers, Flight Service Stations, Approach Control Facilities, and FAA Contract-towered airports.

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Person to contact: Shung-Chai Huang

**FAA Directory** is published twice a year, it contains six sections of data: Washington/Region/Center headquarters' managers; field facilities' managers/supervisors; regional area maps/organizational charts; alphabetical listing; special interest groups; and glossary.

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Date next publication is scheduled: April 1990

Person to contact: Alfredia Brooks

**Airport Activity Statistics of Certificated Route Air Carriers** is a joint publication of the Federal Aviation Administration (FAA) and the Research & Special Programs Administration (RSPA). RSPA furnishes airport activity data on certificated route air carriers; FAA organizes publishes it. Included in the data are passenger enplanements, tons of enplaned freight, express and mail. Both scheduled nonscheduled service and domestic international operations shown by airport and carrier are also included. Breakdown of data includes departures enplanements cargo/mail by airport, carrier & type of operation, and type of aircraft.

Reporting period:	Calendar Year
Latest edition:	1988 data
Order from:	Government Printing Office or National Technical Information Service
Date 1989 Information will be available:	September 1990
Date next publication is available:	November 1990 (1989 data)
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## PREFACE

The U.S. Civil Airmen Statistics is an annual study published to meet the demands of FAA, other government agencies, and industry for more detailed airmen statistics than those published in other FAA reports.

Statistics pertaining to airmen, both pilot and nonpilot, were obtained from the official airman certification records maintained at the FAA Aeronautical Center, Oklahoma City, Oklahoma.

An active Airmen is one who hold both an airmen certificate and a valid medical certificate. Airmen who must have a valid medical to exercise the privileges of their certificate are all airplane pilots, glider, flight navigators, and lighter-than-air pilots are not required to have a medical examination but the numbers represent only those who had a valid medical certificate. Mechanics, Parachute riggers, ground instructors, and dispatchers certificates represent all certificates on record at the Aeronautical Center.

This study was prepared in the Office of Management Systems, Management Standards and Statistics Division, Statistical Analysis Branch (AMS-420), by Patricia W. Carter.

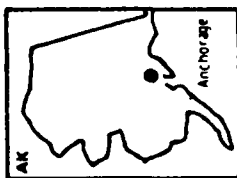
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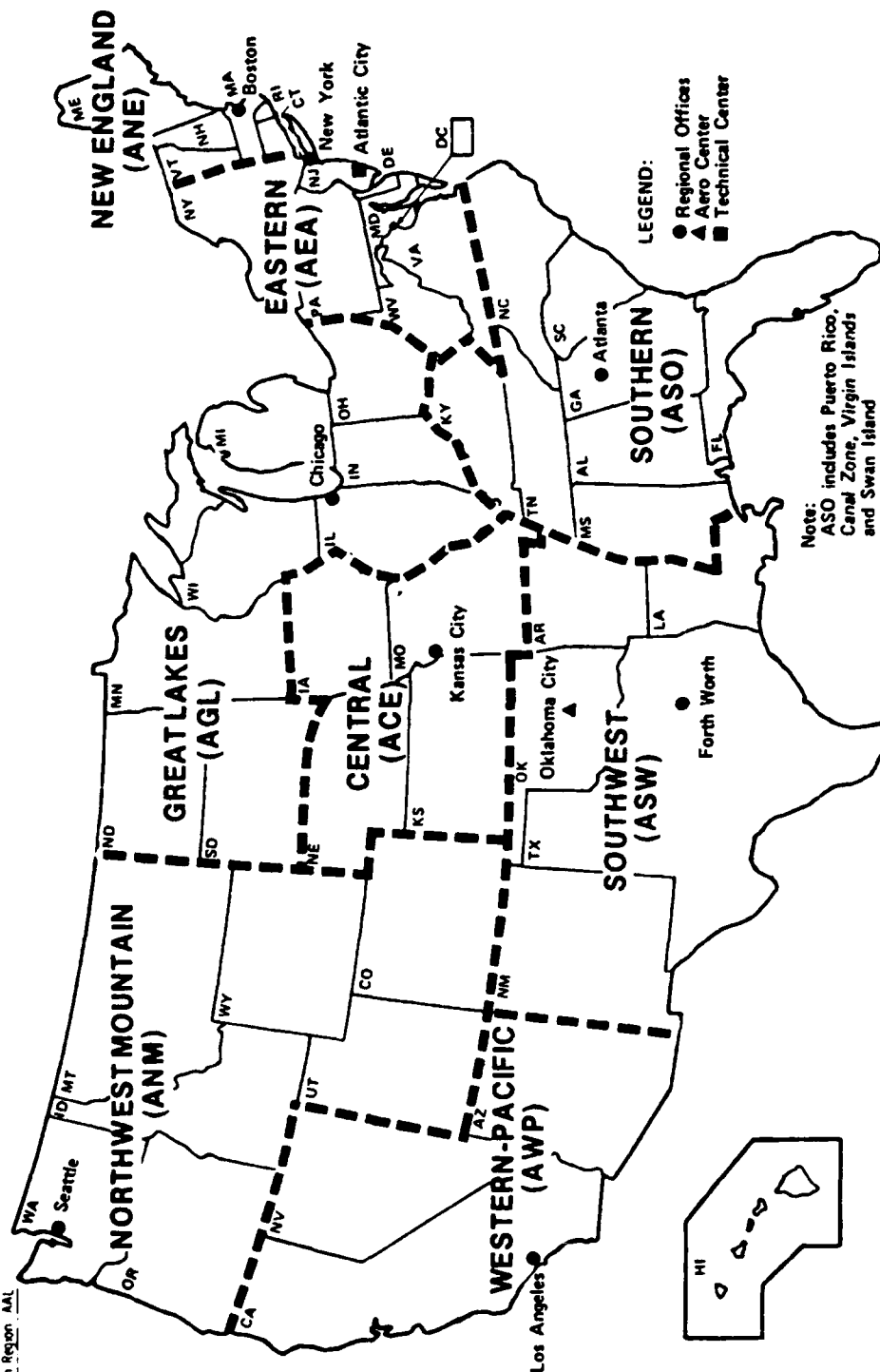
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# FAA REGIONAL BOUNDARIES

Includes Locations of Regional Headquarters and Centers



Alaskan Region AAL





**I. ACTIVE PILOT CERTIFICATES HELD**

**TABLE 1**  
**ESTIMATED ACTIVE PILOT CERTIFICATES HELD**  
**DECEMBER 31, 1980 - 1989**

	1980 1/	1981	1982	1983	1984	1985	1986	1987	1988	1989
<b>CATEGORY</b>										
<b>Pilot--Total</b>	<b>827,071</b>	<b>764,182</b>	<b>733,255</b>	<b>718,004</b>	<b>722,376</b>	<b>709,540</b>	<b>709,118</b>	<b>699,653</b>	<b>694,016</b>	<b>700,010</b>
Student	199,833	179,912	156,361	147,197	150,081	146,652	150,273	146,016	136,913	142,544
Private	357,479	328,562	322,094	318,643	320,086	311,086	305,736	300,949	299,786	293,179
Commercial	183,442	168,580	165,093	159,495	155,929	151,632	147,798	143,645	143,030	144,540
Airline Transport	69,569	70,311	73,471	75,938	79,192	82,740	87,186	91,287	96,968	102,087
Helicopter (only)	6,030	6,453	7,034	7,237	7,532	8,123	8,581	8,702	8,608	8,863
Glider (only) 2/	7,039	7,388	7,842	8,157	8,390	8,168	8,411	7,901	7,600	7,708
Lighter-than-air 2/	3,679	2,976	1,360	1,337	1,166	1,139	1,133	1,153	1,111	1,089
<b>Nonpilot--Total r/</b>	<b>368,356</b>	<b>382,840</b>	<b>399,661</b>	<b>413,199</b>	<b>426,802</b>	<b>395,139</b>	<b>410,079</b>	<b>427,962</b>	<b>448,710</b>	<b>468,405</b>
Mechanic 3/	250,157	262,705	277,436	288,335	298,028	274,100	284,241	297,178	312,419	326,243
Parachute Rigger 3/	9,547	9,716	9,893	10,074	10,194	9,395	9,535	9,659	9,770	9,879
Ground Instructor 3/	61,550	63,246	65,004	66,385	67,463	58,214	59,443	60,861	62,582	64,503
Dispatcher 3/	6,799	7,094	7,580	8,223	8,980	8,511	9,025	9,491	10,020	10,455
Flight Navigator	1,936	1,785	1,695	1,636	1,603	1,542	1,512	1,445	1,400	1,357
Flight Engineer	38,367	38,294	38,053	38,546	40,534	43,377	46,323	49,328	52,519	55,968
Flight Instructor Certificates 4/	60,440	57,523	62,492	62,201	61,173	58,940	57,355	60,316	61,798	61,472
Instrument Ratings 5/	260,461	252,535	255,073	254,271	256,584	258,559	262,388	266,122	273,804	282,804

1/ For 1980 only, a valid medical certificate was defined as one that was issued within the last 27 months.

2/ Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots received a medical examination within the last 25 months.

3/ Numbers represent all certificates on record. No medical examination required.

4/ Not included in total.

5/ Special ratings shown on pilot certificates, do not indicate additional certificates.

r/ Revised.

**TABLE 2**  
**ESTIMATED ACTIVE WOMEN CERTIFICATES HELD**  
**DECEMBER 31, 1980 - 1989**

CATEGORY	1980 1/	1981	1982	1983	1984	1985	1986	1987	1988	1989
<b>Pilot--Total</b>	<b>52,902</b>	<b>47,721</b>	<b>45,305</b>	<b>43,648</b>	<b>44,339</b>	<b>43,483</b>	<b>43,082</b>	<b>42,578</b>	<b>42,299</b>	<b>42,366</b>
Student	26,006	22,591	19,958	18,696	19,435	19,058	18,899	18,367	17,529	17,637
Private	21,554	19,602	19,388	18,801	18,616	17,974	17,532	17,349	17,544	16,988
Commercial	3,993	4,101	4,257	4,281	4,232	4,185	4,176	4,208	4,410	4,760
Airline Transport	480	584	749	884	1,032	1,184	1,334	1,538	1,745	1,898
Helicopter (only)	55	87	113	144	167	196	232	247	259	273
Glider (only) 2/	496	540	574	599	631	653	667	627	590	586
Lighter-than-air 2/	318	216	266	243	226	233	242	242	222	224
<b>Nonpilot--Total r/</b>	<b>4,779</b>	<b>5,201</b>	<b>5,697</b>	<b>6,151</b>	<b>6,591</b>	<b>6,017</b>	<b>6,502</b>	<b>7,101</b>	<b>7,842</b>	<b>8,651</b>
Mechanic 3/	890	1,051	1,298	1,493	1,649	1,775	1,964	2,237	2,565	2,892
Parachute Rigger 3/	562	580	593	605	614	412	414	428	441	451
Ground Instructor 3/	3,015	3,213	3,391	3,554	3,680	2,980	3,087	3,232	3,391	3,554
Dispatcher 3/	141	167	199	249	310	394	460	524	622	711
Flight Navigator	171	189	215	248	336	455	577	680	822	1
Flight Engineer	0	1	1	2	2	1	0	0	1	1,042
Flight Instructor Certificates 4/	2,079	2,165	2,532	2,685	2,736	2,731	2,687	2,909	3,018	3,074

1/ For 1980 only, a valid medical certificate was defined as one that was issued within the last 27 months.

2/ Glider and lighter-than-air pilots are not required to have a medical examination; however, the totals above represent pilots who received a medical examination within the last 25 months.

3/ Numbers represent all certificates on record. No medical examination required.

4/ Not included in total.

r/ Revised.

**TABLE 3**  
**ESTIMATED ACTIVE PILOT AND NONPILOT CERTIFICATES HELD,**  
**BY CLASS OF CERTIFICATES AND BY FAA REGION**  
**DECEMBER 31, 1989**

CLASS OF CERTIFICATE	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	Southwest	Western-Pacific	Outside U.S. 2/
<b>Total—All Pilots</b>	<b>700,010</b>	<b>9,600</b>	<b>34,957</b>	<b>91,582</b>	<b>115,185</b>	<b>34,465</b>	<b>65,470</b>	<b>120,250</b>	<b>81,945</b>	<b>122,344</b>	<b>24,212</b>
<b>Student Pilots—Total</b>	<b>142,544</b>	<b>1,490</b>	<b>6,180</b>	<b>21,317</b>	<b>24,000</b>	<b>8,265</b>	<b>12,633</b>	<b>24,061</b>	<b>15,233</b>	<b>24,474</b>	<b>4,891</b>
<b>Private Pilots—Total</b>	<b>293,179</b>	<b>4,540</b>	<b>17,512</b>	<b>37,126</b>	<b>55,210</b>	<b>14,638</b>	<b>28,029</b>	<b>46,123</b>	<b>33,312</b>	<b>52,407</b>	<b>4,282</b>
Private Airplane (only)	282,540	4,411	17,056	35,501	53,875	14,132	26,966	44,218	32,185	50,279	3,917
Private Airplane, Private Glider	4,049	37	168	683	596	198	378	605	392	935	57
Private Airplane, Commercial Glider	807	3	20	172	118	63	101	82	72	169	7
Private Airplane, Private Gyroplane	31	0	3	2	9	2	0	2	7	6	0
Private Airplane, Private Helicopter	1,459	12	62	178	162	92	163	229	179	297	85
Private Airplane, Private Glider, Private Helicopter	58	0	1	14	9	5	4	5	2	14	4
Private Airplane, Commercial Helicopter	4,186	76	202	567	436	145	409	974	470	699	208
Private Airplane, Private Glider, Commercial Helicopter	30	0	0	6	2	1	7	3	3	5	3
Private Airplane, Commercial Glider, Commercial Helicopter	17	1	0	3	1	0	1	5	2	3	1
Private Airplane, Commercial Gyroplane, Commercial Helicopter	2	0	0	0	2	0	0	0	0	0	0
<b>Commercial Pilots—Total</b>	<b>144,540</b>	<b>2,417</b>	<b>7,088</b>	<b>17,848</b>	<b>21,223</b>	<b>5,929</b>	<b>13,303</b>	<b>26,206</b>	<b>18,434</b>	<b>24,636</b>	<b>7,456</b>
Commercial Airplane (only)	123,612	2,089	6,235	14,946	18,941	5,123	11,183	21,630	15,741	20,618	7,106
Commercial Airplane, Private Glider	2,057	27	98	316	282	69	232	361	218	428	26
Commercial Airplane, Commercial Glider	3,685	30	131	560	505	210	417	570	417	812	33
Commercial Airplane, Commercial Gyroplane, Commercial Glider	3	0	1	0	1	0	0	0	0	1	0
Commercial Airplane, Private Helicopter	325	6	12	50	54	12	30	49	37	65	10
Commercial Airplane, Commercial Glider, Private Helicopter	27	0	0	6	5	1	1	2	3	7	2
Commercial Airplane, Commercial Helicopter	14,085	255	585	1,859	1,355	477	1,357	3,452	1,938	2,541	266
Commercial Airplane, Private Glider, Commercial Helicopter	154	3	5	23	25	7	15	31	13	28	4
Commercial Airplane, Commercial Glider, Commercial Helicopter	535	5	20	84	45	28	59	102	60	125	7
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	19	1	1	2	4	0	3	3	0	4	1
Commercial Airplane, Commercial Gyroplane	27	1	0	1	4	2	5	5	5	4	0
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter											
Commercial Glider	11	0	0	1	2	0	1	1	2	3	1

**TABLE 3**  
**ESTIMATED ACTIVE PILOT AND NONPILOT CERTIFICATES HELD,**  
**BY CLASS OF CERTIFICATES AND BY FAA REGION**  
**DECEMBER 31, 1989**

CLASS OF CERTIFICATE	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	Southwest	Western-Pacific	Outside U.S. 2/
<b>Airline Transport Pilots--Total</b>	<b>102,087</b>	<b>1,030</b>	<b>3,664</b>	<b>12,182</b>	<b>12,876</b>	<b>4,683</b>	<b>9,976</b>	<b>20,773</b>	<b>13,117</b>	<b>17,009</b>	<b>6,777</b>
Airline Transport Airplane (only)	100,317	992	3,622	11,861	12,713	4,569	9,830	20,428	12,832	16,734	6,730
Airline Transport Airplane, Airline Transport Helicopter	1,770	38	42	321	163	114	146	345	279	275	47
<b>Rotorcraft (only) Pilots--Total</b>	<b>8,863</b>	<b>105</b>	<b>326</b>	<b>1,386</b>	<b>729</b>	<b>426</b>	<b>600</b>	<b>2,257</b>	<b>1,106</b>	<b>1,284</b>	<b>644</b>
Private Gyroplane	12	0	1	0	4	1	1	1	1	1	2
Private Helicopter	1,264	6	27	181	90	128	74	139	89	310	220
Commercial Helicopter	7,116	91	295	1,133	608	282	490	2,041	905	919	352
Commercial Helicopter, Private Glider	6	0	0	3	0	0	0	1	0	2	0
Commercial Helicopter, Commercial Glider	2	0	0	1	0	0	0	0	0	1	0
Commercial Gyroplane	1	0	0	0	1	0	0	0	0	0	0
Commercial Helicopter, Commercial Gyroplane	1	0	0	0	0	0	0	0	1	0	0
Airline Transport Helicopter	461	8	3	68	26	15	35	75	110	51	70
<b>Glider (only)--Total</b>	<b>7,708</b>	<b>14</b>	<b>124</b>	<b>1,586</b>	<b>955</b>	<b>472</b>	<b>320</b>	<b>670</b>	<b>565</b>	<b>2,355</b>	<b>147</b>
Private Glider	6,652	10	109	1,336	820	386	692	583	484	2,104	128
Commercial Glider	1,056	4	15	250	135	86	128	87	81	251	19
<b>Lighter-Than-Air--Total</b>	<b>1,089</b>	<b>4</b>	<b>63</b>	<b>137</b>	<b>192</b>	<b>52</b>	<b>109</b>	<b>160</b>	<b>178</b>	<b>179</b>	<b>15</b>
<b>Nonpilots--Total</b>	<b>468,405</b>	<b>4,676</b>	<b>23,091</b>	<b>65,679</b>	<b>60,834</b>	<b>19,676</b>	<b>40,102</b>	<b>82,496</b>	<b>61,726</b>	<b>88,727</b>	<b>21,398</b>
Mechanic 3/	326,243	3,254	17,817	47,108	41,678	13,488	25,678	54,632	44,148	63,857	14,533
Parachute Rigger 3/	9,879	154	435	1,682	1,238	354	1,324	1,887	999	1,641	165
Ground Instructor 3/	64,503	732	3,206	8,842	10,103	2,806	5,914	11,188	8,446	11,576	1,690
Dispatcher 3/	10,455	169	157	2,014	1,027	268	536	1,976	824	1,495	1,989
Flight Navigator	1,357	4	12	217	37	149	142	237	73	392	94
Flight Engineer	55,968	363	1,464	5,816	6,751	2,611	6,508	12,526	7,236	9,766	2,927
<b>Flight Instructor Certificates--Total 4/</b>	<b>61,472</b>	<b>728</b>	<b>3,193</b>	<b>8,704</b>	<b>10,649</b>	<b>2,899</b>	<b>5,940</b>	<b>10,441</b>	<b>7,588</b>	<b>10,212</b>	<b>1,118</b>
<b>Instrument Ratings 5/</b>	<b>282,804</b>	<b>3,442</b>	<b>12,703</b>	<b>36,438</b>	<b>41,754</b>	<b>12,663</b>	<b>25,540</b>	<b>54,610</b>	<b>35,179</b>	<b>47,921</b>	<b>12,554</b>

1/ Includes Outside U.S. total.

2/ Outside U.S. includes airmen certificated by the FAA who live outside the 50 states or foreign countries.

3/ Total ratings issued to date. These ratings retain their validity without periodic medical examinations.

4/ Not included in total.

5/ Special ratings shown on pilot certificates, do not indicate additional ratings.

**TABLE 4**  
**ESTIMATED ACTIVE PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1989**

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. 2/	Flight Instructor 3/
<b>Total</b>	<b>700,010</b>	<b>142,544</b>	<b>293,179</b>	<b>144,540</b>	<b>102,087</b>	<b>17,660</b>	<b>61,472</b>
<b>United States--Total</b>	<b>675,798</b>	<b>137,653</b>	<b>288,897</b>	<b>137,084</b>	<b>95,310</b>	<b>16,854</b>	<b>60,354</b>
<b>Alaskan Region--Total</b>	<b>9,600</b>	<b>1,490</b>	<b>4,540</b>	<b>2,417</b>	<b>1,030</b>	<b>123</b>	<b>728</b>
<b>Central Region--Total</b>	<b>34,957</b>	<b>6,180</b>	<b>17,512</b>	<b>7,088</b>	<b>3,664</b>	<b>513</b>	<b>3,193</b>
Iowa	7,334	1,303	4,066	1,405	472	88	626
Kansas	9,372	1,492	4,795	1,984	978	123	879
Missouri	13,153	2,492	6,083	2,486	1,836	256	1,292
Nebraska	5,098	893	2,568	1,213	378	46	396
<b>Eastern Region--Total</b>	<b>91,582</b>	<b>21,317</b>	<b>37,126</b>	<b>17,848</b>	<b>12,182</b>	<b>3,109</b>	<b>8,704</b>
Delaware	1,732	382	697	331	281	41	194
District of Columbia	613	149	254	135	43	32	58
Maryland	9,999	2,109	4,408	1,935	1,258	289	935
New Jersey	14,532	3,422	5,800	2,570	2,234	506	1,366
New York	25,156	6,440	10,315	4,836	2,480	1,085	2,304
Pennsylvania	21,523	5,203	8,979	3,689	3,024	628	2,220
Virginia	15,525	3,037	5,468	3,878	2,681	461	1,413
West Virginia	2,502	575	1,205	474	181	67	214
<b>Great Lakes Region--Total</b>	<b>115,185</b>	<b>24,000</b>	<b>55,210</b>	<b>21,223</b>	<b>12,876</b>	<b>1,876</b>	<b>10,619</b>
Illinois	27,021	5,891	11,994	4,774	3,904	458	2,722
Indiana	12,410	2,746	6,075	2,303	1,117	169	1,141
Michigan	20,016	4,305	9,907	3,511	1,855	438	1,805
Minnesota	16,185	2,997	7,630	2,999	2,389	170	1,383
North Dakota	3,281	666	1,618	872	108	17	290
Ohio	21,936	4,554	10,610	4,106	2,185	481	2,117
South Dakota	2,494	496	1,203	594	181	20	218
Wisconsin	11,842	2,345	6,173	2,064	1,137	123	966
<b>New England Region--Total</b>	<b>34,465</b>	<b>8,265</b>	<b>14,638</b>	<b>5,929</b>	<b>4,683</b>	<b>950</b>	<b>2,899</b>
Connecticut	9,151	2,036	3,540	1,519	1,791	265	777
Maine	3,879	852	1,779	822	362	64	298
Massachusetts	13,023	3,506	5,825	2,126	1,174	392	1,098
New Hampshire	4,928	1,065	1,937	819	980	127	439
Rhode Island	1,602	343	746	306	165	42	115
Vermont	1,882	463	811	337	211	60	172

**TABLE 4**  
**ESTIMATED ACTIVE PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1989**

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. 2/	Flight Instructor 3/
<b>Northwest Mountain Region--Total</b>	<b>65,470</b>	<b>12,633</b>	<b>28,029</b>	<b>13,303</b>	<b>9,976</b>	<b>1,529</b>	<b>5,940</b>
Colorado	17,536	3,828	6,272	3,459	3,441	536	1,797
Idaho	4,231	695	2,098	950	421	67	365
Montana	3,924	673	1,993	900	320	38	362
Oregon	10,039	1,864	5,213	2,005	765	192	837
Utah	5,690	1,180	2,418	1,025	945	122	467
Washington	22,110	4,077	8,981	4,582	3,927	543	1,946
Wyoming	1,940	316	1,054	382	157	31	166
<b>Southern Region--Total</b>	<b>120,250</b>	<b>24,061</b>	<b>46,123</b>	<b>26,206</b>	<b>20,773</b>	<b>3,087</b>	<b>10,441</b>
Alabama	9,394	1,808	3,699	2,275	748	864	883
Florida	47,220	9,061	17,960	11,015	8,335	849	4,192
Georgia	18,607	3,458	6,461	3,719	4,617	352	1,448
Kentucky	5,775	1,206	2,496	995	939	139	522
Mississippi	4,628	992	1,797	1,360	380	99	397
North Carolina	15,415	3,358	6,180	2,993	2,486	398	1,205
South Carolina	6,969	1,614	2,836	1,609	786	124	574
Tennessee	12,242	2,564	4,694	2,240	2,482	262	1,220
<b>Southwest Region--Total</b>	<b>81,945</b>	<b>15,233</b>	<b>33,312</b>	<b>18,434</b>	<b>13,117</b>	<b>1,849</b>	<b>7,588</b>
Arkansas	5,962	1,183	2,681	1,551	475	72	506
Louisiana	8,136	1,612	3,110	2,182	929	303	741
New Mexico	5,152	1,127	2,052	1,250	511	212	502
Oklahoma	10,886	2,109	5,263	2,380	982	152	928
Texas	51,809	9,202	20,206	11,071	10,220	1,110	4,911
<b>Western-Pacific Region--Total</b>	<b>122,344</b>	<b>24,474</b>	<b>52,407</b>	<b>24,636</b>	<b>17,009</b>	<b>3,818</b>	<b>10,212</b>
Arizona	15,815	3,143	6,460	3,360	2,310	542	1,531
California	97,332	19,437	43,034	19,303	12,640	2,918	7,898
Hawaii	3,814	897	866	905	946	200	284
Nevada	5,383	997	2,047	1,068	1,113	158	499
<b>Outside U. S. --Total 4/</b>	<b>24,212</b>	<b>4,891</b>	<b>4,282</b>	<b>7,456</b>	<b>6,777</b>	<b>806</b>	<b>1,118</b>
<b>Other U. S. Areas:</b>	<b>1,977</b>	<b>601</b>	<b>641</b>	<b>354</b>	<b>338</b>	<b>43</b>	<b>0</b>
American Samoa	16	2	5	3	4	2	0
Canal Zone	2	1	0	0	1	0	0
Guam	138	29	27	22	60	0	0
Puerto Rico	1,528	506	509	261	215	37	0
Virgin Island	290	62	100	66	58	4	0
Wake Island	3	1	0	2	0	0	0

1/ Includes Outside U.S.

2/ Includes helicopter, glider, and lighter-than-air.

3/ Not included in total.

4/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

**TABLE 5**  
**ESTIMATED ACTIVE WOMEN PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1989**

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. /2	Flight Instructor 3/
<b>Total 1/</b>	<b>42,376</b>	<b>17,637</b>	<b>16,988</b>	<b>4,760</b>	<b>1,898</b>	<b>1,093</b>	<b>3,074</b>
<b>United States--Total</b>	<b>41,590</b>	<b>17,310</b>	<b>16,763</b>	<b>4,598</b>	<b>1,860</b>	<b>1,059</b>	<b>3,029</b>
<b>Alaskan Region--Total</b>	<b>747</b>	<b>264</b>	<b>378</b>	<b>78</b>	<b>21</b>	<b>6</b>	<b>43</b>
<b>Central Region--Total</b>	<b>1,894</b>	<b>747</b>	<b>883</b>	<b>168</b>	<b>63</b>	<b>33</b>	<b>116</b>
Iowa	339	129	163	34	8	5	15
Kansas	521	197	258	40	19	7	32
Missouri	788	333	343	68	27	17	53
Nebraska	246	88	119	26	9	4	16
<b>Eastern Region--Total</b>	<b>5,864</b>	<b>2,633</b>	<b>2,142</b>	<b>649</b>	<b>235</b>	<b>205</b>	<b>442</b>
Delaware	106	50	33	13	6	4	9
District of Columbia	57	22	26	2	6	1	4
Maryland	683	283	285	64	35	16	48
New Jersey	903	434	290	107	38	34	73
New York	1,593	727	552	183	51	80	118
Pennsylvania	1,460	652	559	158	50	41	105
Virginia	939	410	349	109	46	25	79
West Virginia	123	55	48	13	3	4	6
<b>Great Lakes Region--Total</b>	<b>6,898</b>	<b>2,843</b>	<b>2,857</b>	<b>795</b>	<b>280</b>	<b>123</b>	<b>548</b>
Illinois	1,722	721	668	213	98	22	141
Indiana	689	281	290	80	25	13	51
Michigan	1,227	516	495	135	41	40	92
Minnesota	930	350	402	110	52	16	87
North Dakota	164	56	75	32	1	0	16
Ohio	1,350	572	559	147	44	28	103
South Dakota	112	42	55	10	4	1	6
Wisconsin	704	305	313	68	15	3	52
<b>New England Region--Total</b>	<b>2,312</b>	<b>1,047</b>	<b>874</b>	<b>220</b>	<b>108</b>	<b>63</b>	<b>163</b>
Connecticut	578	250	210	58	39	21	47
Maine	210	93	92	17	7	1	13
Massachusetts	932	451	344	87	33	17	60
New Hampshire	348	157	126	31	19	15	30
Rhode Island	105	34	55	12	3	1	3
Vermont	139	62	47	15	7	8	10



**TABLE 5**  
**ESTIMATED ACTIVE WOMEN PILOTS AND FLIGHT INSTRUCTORS**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1989**

FAA REGION AND STATE	Total Pilots	Students	Private	Commercial	Airline Transport	Misc. /2	Flight Instructor 3/
<b>Northwest Mountain Region--Total</b>	<b>4,394</b>	<b>1,729</b>	<b>1,866</b>	<b>493</b>	<b>197</b>	<b>109</b>	<b>319</b>
Colorado	1,335	583	462	159	82	49	124
Idaho	254	89	121	35	5	4	21
Montana	192	75	94	19	3	1	13
Oregon	717	272	344	68	19	14	45
Utah	261	111	106	22	15	7	16
Washington	1,532	567	679	179	73	34	98
Wyoming	103	32	60	11	0	0	2
<b>Southern Region--Total</b>	<b>6,380</b>	<b>2,791</b>	<b>2,355</b>	<b>718</b>	<b>367</b>	<b>149</b>	<b>457</b>
Alabama	400	177	150	25	7	41	19
Florida	2,854	1,202	1,090	367	148	47	223
Georgia	820	363	313	81	48	15	47
Kentucky	263	111	93	30	28	1	22
Mississippi	233	116	80	22	10	5	13
North Carolina	808	365	291	87	46	19	61
South Carolina	340	178	109	29	16	8	17
Tennessee	662	279	229	77	64	13	55
<b>Southwest Region--Total</b>	<b>4,409</b>	<b>1,857</b>	<b>1,787</b>	<b>478</b>	<b>188</b>	<b>99</b>	<b>308</b>
Arkansas	277	121	127	24	3	2	17
Louisiana	338	158	126	40	10	4	26
New Mexico	390	176	121	46	16	31	37
Oklahoma	625	246	274	71	29	5	51
Texas	2,779	1,156	1,139	297	130	57	177
<b>Western-Pacific Region--Total</b>	<b>8,692</b>	<b>3,399</b>	<b>3,621</b>	<b>999</b>	<b>401</b>	<b>272</b>	<b>633</b>
Arizona	1,189	475	475	136	52	51	93
California	6,875	2,659	2,928	790	308	190	491
Hawaii	269	124	67	35	26	17	26
Nevada	359	141	151	38	15	14	23
<b>Outside U. S. --Total 4/</b>	<b>786</b>	<b>327</b>	<b>225</b>	<b>162</b>	<b>38</b>	<b>34</b>	<b>45</b>
<b>Other U. S. Areas:</b>	<b>89</b>	<b>52</b>	<b>20</b>	<b>7</b>	<b>8</b>	<b>2</b>	<b>0</b>
American Samoa	1	1	0	0	0	0	0
Canal Zone	0	0	0	0	0	0	0
Guam	13	7	2	1	3	0	0
Puerto Rico	57	39	13	1	2	2	0
Virgin Island	17	4	5	5	3	0	0
Wake Island	1	1	0	0	0	0	0

1/ Includes Outside U.S.

2/ Includes helicopter, glider, and lighter-than-air.

3/ Not included in total.

4/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

**TABLE 6**  
**ESTIMATED ACTIVE HELICOPTER PILOTS**  
**BY CLASS OF CERTIFICATES**  
**DECEMBER 31, 1989**

CLASS OF CERTIFICATE	Number of Certificates Held
<b>TOTAL</b>	<b>31,602</b>
Private Helicopter	1,264
Private Helicopter, Private Airplane	1,459
Private Helicopter, Private Airplane, Private Glider	58
Private Helicopter, Commercial Airplane	325
Private Helicopter, Commercial Airplane, Commercial Glider	27
Private Gyroplane	12
Private Gyroplane, Private Airplane	31
Commercial Helicopter	7,116
Commercial Helicopter, Private Airplane	4,186
Commercial Helicopter, Private Glider	6
Commercial Helicopter, Commercial Glider	2
Commercial Helicopter, Private Airplane, Commercial Gyroplane	2
Commercial Helicopter, Private Airplane, Private Glider	30
Commercial Helicopter, Private Airplane, Commercial Glider	17
Commercial Helicopter, Commercial Airplane	14,085
Commercial Helicopter, Commercial Airplane, Private Glider	154
Commercial Helicopter, Commercial Airplane, Commercial Glider	535
Commercial Gyroplane	1
Commercial Helicopter, Commercial Airplane, Commercial Gyroplane	19
Commercial Helicopter, Commercial Airplane, Commercial Gyroplane, Commercial Glider	11
Commercial Helicopter, Commercial Gyroplane	1
Commercial Gyroplane, Commercial Airplane	27
Commercial Gyroplane, Commercial Airplane, Commercial Glider	3
Airline Transport Helicopter	461
Airline Transport Airplane, Airline Transport Helicopter	1,770

**TABLE 7**  
**ESTIMATED ACTIVE GLIDER PILOTS**  
**BY CLASS OF CERTIFICATES**  
**DECEMBER 31, 1989**

CLASS OF CERTIFICATE	Number of Certificates Held
<b>Total</b>	<b>19,149</b>
Private Glider	6,652
Private Glider, Private Airplane	4,049
Private Glider, Private Airplane, Private Helicopter	58
Private Glider, Private Airplane, Commercial Helicopter	30
Private Glider, Commercial Airplane	2,057
Private Glider, Commercial Airplane, Commercial Helicopter	154
Private Glider, Commercial Helicopter	6
Commercial Glider	1,056
Commercial Glider, Commercial Airplane	3,685
Commercial Glider, Private Airplane	807
Commercial Glider, Private Airplane, Commercial Helicopter	17
Commercial Glider, Commercial Helicopter	2
Commercial Glider, Commercial Airplane, Private Helicopter	27
Commercial Glider, Commercial Airplane, Commercial Helicopter	535
Commercial Glider, Commercial Airplane, Commercial Gyroplane	3
Commercial Glider, Commercial Airplane, Commercial Gyroplane, Commercial Helicopter	11

**TABLE 8**  
**ESTIMATED ACTIVE HELICOPTER AND GLIDER PILOTS**  
**DECEMBER 31, 1985-1989**

Calendar Year	Total Helicopter Pilots 1/		Total Glider Pilots 2/	
	Number	Percent Change	Number	Percent Change
1989	31,602	0.8%	19,149	0.3%
1988	31,349	-0.5%	19,095	-2.2%
1987	31,513	-0.6%	19,530	-4.1%
1986	31,697	1.6%	20,355	0.2%
1985	31,206	2.3%	20,308	-2.0%

1/ Includes pilots with ratings to fly helicopters only.

2/ Includes pilots with ratings to fly gliders only.

**TABLE 9**  
**ESTIMATED TOTAL PILOTS AND INSTRUMENT RATED PILOTS**  
**DECEMBER 31, 1985-1989**

Calendar Year	Total Number 1/	Instrument Rated Pilots	
		Number	Percent of Total
1989	557,466	282,804	51%
1988	557,103	273,804	49%
1987	553,637	266,122	48%
1986	558,845	262,388	47%
1985	562,888	258,559	46%

1/ Excludes student pilots.

**TABLE 10**  
**ESTIMATED ACTIVE PILOT CERTIFICATES HELD**  
**BY CATEGORY AND AGE GROUP OF HOLDER**  
**1989, 1988, AND 1985**

YEAR	Type of Pilot Certificates								
	Total Active Pilots			Student			Private		
	1989	1988	1985	1989	1988	1985	1989	1988	1985
Total	700,010	694,016	709,540	142,544	136,913	146,652	293,179	299,786	311,086
Age Group									
14-15	233	243	266	233	243	266	0	0	0
16-19	19,487	19,995	16,868	15,207	15,224	13,184	3,910	4,367	3,382
20-24	55,353	55,141	59,171	24,346	23,838	26,389	19,804	20,824	22,727
25-29	82,706	83,355	91,188	25,708	25,187	28,420	29,133	31,308	35,897
30-34	96,167	96,632	103,012	22,930	21,946	24,868	38,367	40,858	46,081
35-39	97,183	96,922	109,677	18,529	17,420	19,765	43,781	44,641	47,322
40-44	98,638	97,054	93,050	14,000	12,959	13,191	41,769	41,632	40,288
45-49	79,453	77,435	72,354	8,847	8,216	8,029	34,283	34,073	32,153
50-54	58,701	57,909	59,996	5,269	4,935	5,543	25,691	25,962	28,473
55-59	46,890	46,820	47,698	3,536	3,363	3,716	22,376	23,453	27,206
60 and over	65,199	62,510	56,260	3,939	3,582	3,281	34,065	32,668	27,557

YEAR	Type of Pilot Certificates								
	Commercial			Airline Transport			Helicopter (Only)		
	1989	1988	1985	1989	1988	1985	1989	1988	1985
Total	144,540	143,030	151,632	102,087	96,968	82,740	8,863	8,608	8,123
Age Group									
14-15	0	0	0	0	0	0	0	0	0
16-19	244	260	135	0	0	0	24	18	20
20-24	9,654	8,804	8,193	411	433	528	817	854	789
25-29	18,687	17,542	17,323	6,258	6,395	6,370	2,265	2,228	2,178
30-34	16,944	16,592	17,036	14,920	14,224	11,807	1,823	1,749	1,572
35-39	15,924	16,190	22,866	16,112	15,692	15,982	1,252	1,396	1,945
40-44	20,277	21,387	23,683	19,490	18,226	13,790	1,629	1,456	944
45-49	18,365	18,282	18,432	16,331	15,456	12,541	638	536	407
50-54	13,783	13,897	15,274	13,074	12,263	9,933	260	222	153
55-59	11,529	11,394	10,310	8,784	7,939	5,695	88	90	77
60 and over	19,133	18,682	18,380	6,707	6,340	6,094	67	59	38

YEAR	Type of Pilot Certificates								
	Glider (Only) 1/			Lighter-than-air 1/			Flight Instructor 2/		
	1989	1988	1985	1989	1988	1985	1989	1988	1985
Total	7,708	7,600	8,168	1,089	1,111	1,139	61,472	61,798	58,940
Age Group									
14-15	0	0	0	0	0	0	0	0	0
16-19	91	112	130	11	14	17	66	95	65
20-24	286	346	500	35	42	45	4,649	4,484	4,379
25-29	548	574	847	107	121	153	8,062	8,048	8,218
30-34	983	1,052	1,399	200	211	249	8,252	8,622	8,640
35-39	1,314	1,307	1,485	271	276	312	8,282	8,450	9,859
40-44	1,253	1,171	978	220	223	176	9,251	9,518	8,330
45-49	844	764	698	145	108	94	7,470	7,372	6,251
50-54	591	581	574	33	49	46	5,529	5,471	4,946
55-59	539	542	660	38	39	34	4,196	4,124	3,363
60 and over	1,259	1,151	897	29	28	13	5,715	5,614	4,889

1/ Glider and light-than-air pilots are not required to have a medical examination; however, totals above represent pilots who received a medical examination.

2/ Not included in total active pilots.

**TABLE 11**  
**AVERAGE AGE OF ACTIVE PILOTS BY CATEGORY**

CALENDAR YEAR	TOTAL 1/	STUDENT	PRIVATE	COMMERCIAL	AIRLINE TRANSPORT
1980	37.5	30.5	39.0	40.4	41.9
1981	37.8	30.7	39.3	40.7	42
1982	38.3	31.2	39.5	41.0	42.3
1983	38.8	31.7	40.0	41.5	42.5
1984	39.2	32.1	40.4	42.0	42.7
1985	39.5	32.4	40.8	42.4	42.8
1986	39.7	32.2	41.1	42.6	43
1987	39.9	32.3	41.4	42.7	43.1
1988	40.1	32.5	41.4	42.6	43.2
1989	40.2	32.7	41.8	42.5	43.4

1/ Includes helicopter (only), glider (only), and lighter-than-air pilots not shown separately.

**TABLE 12**  
**ESTIMATED INSTRUMENT RATINGS HELD**  
**BY CLASS OF CERTIFICATES**  
**DECEMBER 31, 1989 AND 1988**

CLASS OF CERTIFICATE	1989	1988	Percent Change
<b>Total--All Pilots</b>	<b>282,804</b>	<b>273,804</b>	<b>3%</b>
<b>Private Pilots--Total</b>	<b>51,067</b>	<b>49,381</b>	<b>3%</b>
Private Airplane (only)	45,859	45,316	3%
Private Airplane, Private Glider	1,023	1,007	2%
Private Airplane, Commercial Glider	119	108	10%
Private Airplane, Private Helicopter	403	356	13%
Private Airplane, Private Glider, Private Helicopter	27	25	8%
Private Airplane, Commercial Helicopter	2,606	2,537	3%
Private Airplane, Private Gyroplane	5	3	67%
Private Airplane, Private Glider, Commercial Helicopter	12	15	-20%
Private Airplane, Commercial Glider, Commercial Helicopter	12	13	-8%
Private Airplane, Other	1	1	0%
<b>Commercial Pilots--Total</b>	<b>123,908</b>	<b>121,674</b>	<b>2%</b>
Commercial Airplane (only)	105,402	102,982	2%
Commercial Airplane, Private Glider	1,783	1,778	0%
Commercial Airplane, Commercial Glider	3,037	3,033	0%
Commercial Airplane, Private Helicopter	282	264	7%
Commercial Airplane, Commercial Helicopter	12,708	12,911	-2%
Commercial Airplane, Private Glider, Commercial Helicopter	136	132	3%
Commercial Airplane, Commercial Glider, Commercial Helicopter	488	506	-4%
Commercial Airplane, Commercial Gyroplane	19	15	27%
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	16	18	-11%
Commercial Airplane, Commercial Gyroplane, Commercial Glider	2	1	100%
Commercial Airplane, Commercial Glider, Private Helicopter	24	21	14%
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter			
Commercial Glider	11	13	-15%
<b>Airline Transport Pilots--Total</b>	<b>102,087</b>	<b>96,968</b>	<b>5%</b>
Airline Transport Airplane (only)	100,317	95,282	5%
Airline Transport Airplane, Airline Transport Helicopter	1,770	1,686	5%
<b>Rotorcraft Pilots--Total</b>	<b>5,742</b>	<b>5,781</b>	<b>-1%</b>
Commercial Helicopter	5,660	5,695	-1%
Airline Transport Helicopter	71	75	-5%
Other	11	11	0%

**TABLE 13**  
**ESTIMATED INSTRUMENT RATINGS HELD, BY CLASS OF CERTIFICATES, BY FAA REGION**  
**DECEMBER 31, 1989**

Class of Certificate	Total 1/	Alaskan	Central	Eastern	Great Lakes	New England	Northwest Mountain	Southern	Southwest	Western-Pacific	Outside U.S. 2/
<b>Total--All Pilots</b>	<b>282,804</b>	<b>3,442</b>	<b>12,703</b>	<b>36,438</b>	<b>41,754</b>	<b>12,663</b>	<b>25,540</b>	<b>54,610</b>	<b>35,179</b>	<b>47,921</b>	<b>12,554</b>
<b>Private Pilots--Total</b>	<b>51,067</b>	<b>341</b>	<b>2,848</b>	<b>7,218</b>	<b>9,726</b>	<b>2,600</b>	<b>3,897</b>	<b>8,917</b>	<b>5,667</b>	<b>9,394</b>	<b>459</b>
<b>Private Airplane (only)</b>	<b>46,859</b>	<b>285</b>	<b>2,632</b>	<b>6,561</b>	<b>9,237</b>	<b>2,407</b>	<b>3,541</b>	<b>7,898</b>	<b>5,175</b>	<b>8,713</b>	<b>410</b>
Private Airplane, Private Glider	1,023	5	33	164	154	60	69	166	103	256	13
Private Airplane, Commercial Glider	119	2	4	18	14	14	22	8	15	21	1
Private Airplane, Private Helicopter	403	1	18	54	50	27	38	80	53	76	6
Private Airplane, Private Glider, Private Helicopter	27	0	0	6	5	2	3	3	1	6	1
Private Airplane, Commercial Helicopter	2,606	47	159	410	262	88	219	757	316	320	28
Private Airplane, Private Gyroplane	5	0	2	0	2	1	0	0	0	0	0
Private Airplane, Private Glider, Commercial Helicopter	12	0	0	3	0	1	4	2	2	0	0
Private Airplane, Commercial Glider, Commercial Helicopter	12	1	0	2	1	0	1	3	2	2	0
Private Airplane, Other	1	0	0	0	1	0	0	0	0	0	0
<b>Commercial Pilots--Total</b>	<b>123,908</b>	<b>1,988</b>	<b>5,935</b>	<b>16,059</b>	<b>18,620</b>	<b>5,177</b>	<b>11,275</b>	<b>23,101</b>	<b>15,631</b>	<b>20,887</b>	<b>5,235</b>
Commercial Airplane (only)	105,402	1,704	5,172	13,410	16,600	4,460	9,480	18,942	13,278	17,421	4,935
Commercial Airplane, Private Glider	1,783	23	84	273	247	62	187	327	183	374	23
Commercial Airplane, Commercial Glider	3,037	24	113	459	440	173	343	465	342	652	26
Commercial Airplane, Private Helicopter	282	5	10	49	45	11	24	44	31	55	8
Commercial Airplane, Commercial Helicopter	12,708	223	529	1,758	1,213	435	1,165	3,200	1,725	2,231	229
Commercial Airplane, Private Glider, Commercial Helicopter	136	3	5	22	22	7	14	26	11	23	3
Commercial Airplane, Commercial Glider, Commercial Helicopter	488	5	20	81	39	26	53	92	52	113	7
Commercial Airplane, Commercial Gyroplane	19	0	0	1	3	2	4	2	4	3	0
Commercial Airplane, Commercial Helicopter, Commercial Gyroplane	16	1	1	0	4	0	3	2	0	4	1
Commercial Airplane, Commercial Gyroplane, Commercial Glider	2	0	1	0	0	0	0	0	0	1	0
Commercial Airplane, Commercial Glider, Private Helicopter	24	0	0	5	5	1	1	0	3	7	2
Commercial Airplane, Commercial Gyroplane, Commercial Helicopter, Commercial Glider	11	0	0	1	2	0	1	1	2	3	1
<b>Airline Transport Pilots--Total</b>	<b>102,087</b>	<b>1,030</b>	<b>3,664</b>	<b>12,182</b>	<b>12,876</b>	<b>4,683</b>	<b>9,976</b>	<b>20,773</b>	<b>13,117</b>	<b>17,009</b>	<b>6,777</b>
Airline Transport Airplane (only)	100,317	992	3,622	11,861	12,713	4,569	9,830	20,428	12,838	16,734	6,730
Airline Transport Airplane, Airline Transport Helicopter	1,770	38	42	321	163	114	146	345	279	275	47
<b>Rotorcraft Pilots (only)--Total</b>	<b>5,742</b>	<b>83</b>	<b>256</b>	<b>979</b>	<b>532</b>	<b>203</b>	<b>392</b>	<b>1,819</b>	<b>764</b>	<b>631</b>	<b>83</b>
Commercial Helicopter	5,660	82	256	966	523	199	386	1,808	745	618	77
Airline Transport Helicopter	71	1	0	10	9	3	6	9	18	9	6
Other	11	0	0	3	0	1	0	2	1	4	0

1/ Includes Outside U.S. total.

2/ Outside U.S. includes airmen certificated by FAA who live outside the 50 states or foreign countries.



## **II. ACTIVE NONPILOT CERTIFICATES HELD**

**TABLE 14**  
**ESTIMATED ACTIVE NONPILOT AIRMEN CERTIFICATES HELD,**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1989 1/**

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Total 2/</b>	<b>467,979</b>	<b>325,961</b>	<b>9,875</b>	<b>64,460</b>	<b>10,428</b>	<b>1,365</b>	<b>55,890</b>
<b>United States--Total</b>	<b>446,581</b>	<b>311,428</b>	<b>9,710</b>	<b>62,770</b>	<b>8,439</b>	<b>1,271</b>	<b>52,963</b>
<b>Alaskan Region--Total</b>	<b>4,676</b>	<b>3,254</b>	<b>154</b>	<b>732</b>	<b>169</b>	<b>4</b>	<b>363</b>
<b>Central Region--Total</b>	<b>23,091</b>	<b>17,817</b>	<b>435</b>	<b>3,206</b>	<b>157</b>	<b>12</b>	<b>1,464</b>
Iowa	2,847	2,095	90	535	8	0	119
Kansas	6,337	4,883	113	952	43	4	342
Missouri	11,958	9,405	166	1,388	101	4	894
Nebraska	1,949	1,434	66	331	5	4	109
<b>Eastern Region--Total</b>	<b>65,679</b>	<b>47,108</b>	<b>1,682</b>	<b>8,842</b>	<b>2,014</b>	<b>217</b>	<b>5,816</b>
Delaware	1,235	888	27	158	17	5	140
District of Columbia	334	202	20	82	15	0	15
Maryland	4,307	2,613	141	855	64	10	624
New Jersey	11,212	7,889	238	1,368	352	58	1,307
New York	25,065	19,732	401	2,635	1,114	62	1,121
Pennsylvania	15,247	11,112	366	2,184	304	44	1,237
Virginia	7,268	3,982	441	1,341	143	38	1,323
West Virginia	1,011	690	48	219	5	0	49
<b>Great Lakes Region--Total</b>	<b>60,834</b>	<b>41,678</b>	<b>1,238</b>	<b>10,103</b>	<b>1,027</b>	<b>37</b>	<b>6,751</b>
Illinois	16,559	10,826	279	2,586	333	14	2,521
Indiana	6,091	4,316	190	1,005	74	5	501
Michigan	9,805	6,888	190	1,898	109	7	713
Minnesota	10,535	7,133	140	1,256	329	2	1,675
North Dakota	964	742	26	154	3	0	39
Ohio	11,205	7,944	260	2,080	124	4	793
South Dakota	981	692	22	208	2	1	55
Wisconsin	4,694	3,136	131	916	53	4	454
<b>New England Region--Total</b>	<b>19,268</b>	<b>13,206</b>	<b>350</b>	<b>2,763</b>	<b>259</b>	<b>157</b>	<b>2,533</b>
Connecticut	5,831	3,761	81	779	81	101	1,028
Maine	1,388	905	45	242	28	8	160
Massachusetts	8,547	6,633	165	1,079	94	13	563
New Hampshire	2,040	953	31	370	31	27	628
Rhode Island	823	562	18	156	10	3	74
Vermont	639	392	10	137	15	5	80

**TABLE 14**  
**ESTIMATED ACTIVE NONPILOT AIRMEN CERTIFICATES HELD,**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1989 1/**

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Northwest Mountain Region--Total</b>	<b>40,102</b>	<b>25,678</b>	<b>1,324</b>	<b>5,914</b>	<b>536</b>	<b>142</b>	<b>6,508</b>
Colorado	12,287	7,439	162	1,891	215	27	2,553
Idaho	1,742	1,143	161	311	9	4	114
Montana	2,039	1,286	281	358	5	3	106
Oregon	4,328	2,995	243	716	43	26	305
Utah	3,109	1,908	81	440	19	5	656
Washington	15,553	10,118	363	2,045	235	75	2,717
Wyoming	1,044	789	33	153	10	2	57
<b>Southern Region--Total</b>	<b>82,478</b>	<b>54,682</b>	<b>1,887</b>	<b>11,188</b>	<b>1,958</b>	<b>237</b>	<b>12,526</b>
Alabama	6,104	4,851	135	897	12	9	200
Florida	37,765	25,900	560	5,045	1,187	185	4,888
Georgia	16,720	10,762	287	1,543	313	13	3,802
Kentucky	3,090	1,848	161	479	106	1	495
Mississippi	1,820	1,256	44	373	9	3	135
North Carolina	7,574	4,463	436	1,223	135	14	1,303
South Carolina	2,896	1,861	92	547	24	2	370
Tennessee	6,509	3,741	172	1,081	172	10	1,333
<b>Southwest Region--Total</b>	<b>61,726</b>	<b>44,148</b>	<b>999</b>	<b>8,446</b>	<b>824</b>	<b>73</b>	<b>7,236</b>
Arkansas	2,510	1,800	72	447	17	1	173
Louisiana	4,820	3,627	92	655	48	5	393
New Mexico	2,221	1,476	69	505	25	3	143
Oklahoma	13,885	11,949	161	1,362	35	7	371
Texas	38,290	25,296	605	5,477	699	57	6,156
<b>Western-Pacific Region--Total</b>	<b>88,727</b>	<b>63,857</b>	<b>1,841</b>	<b>11,576</b>	<b>1,495</b>	<b>392</b>	<b>9,766</b>
Arizona	9,605	6,707	197	1,583	240	20	858
California	73,029	53,243	1,330	9,084	1,063	306	8,003
Hawaii	3,185	2,249	57	381	143	10	345
Nevada	2,908	1,658	57	528	49	56	560
<b>Outside U. S. --Total 3/</b>	<b>21,398</b>	<b>14,533</b>	<b>165</b>	<b>1,680</b>	<b>1,989</b>	<b>94</b>	<b>2,927</b>
<b>Other U. S. Areas:</b>	<b>1,601</b>	<b>1,210</b>	<b>34</b>	<b>203</b>	<b>57</b>	<b>1</b>	<b>96</b>
American Samoa	13	8	0	4	0	0	1
Canal Zone	39	15	18	3	2	0	1
Guam	178	101	3	24	5	0	45
Puerto Rico	1,218	973	11	149	47	1	37
Virgin Island	143	103	2	23	3	0	12
Wake Island	10	10	0	0	0	0	0

1/ Data for flight engineers and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers and ground instructors represent total ratings issued to date. These ratings retain their validity.

2/ Includes Outside U. S.

3/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

**TABLE 15**  
**ESTIMATED ACTIVE WOMEN NONPILOT CERTIFICATES HELD,**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1989 1/**

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Total 2/</b>	<b>8,651</b>	<b>2,892</b>	<b>451</b>	<b>3,554</b>	<b>711</b>	<b>1</b>	<b>1,042</b>
<b>United States--Total</b>	<b>8,523</b>	<b>2,877</b>	<b>446</b>	<b>3,490</b>	<b>683</b>	<b>0</b>	<b>1,027</b>
<b>Alaskan Region--Total</b>	<b>137</b>	<b>29</b>	<b>11</b>	<b>49</b>	<b>37</b>	<b>0</b>	<b>11</b>
<b>Central Region--Total</b>	<b>381</b>	<b>182</b>	<b>18</b>	<b>155</b>	<b>4</b>	<b>0</b>	<b>22</b>
Iowa	82	44	2	33	1	0	2
Kansas	124	68	6	45	0	0	5
Missouri	142	60	7	58	3	0	14
Nebraska	33	10	3	19	0	0	1
<b>Eastern Region--Total</b>	<b>1,099</b>	<b>258</b>	<b>88</b>	<b>468</b>	<b>152</b>	<b>0</b>	<b>133</b>
Delaware	25	11	2	9	1	0	2
District of Columbia	11	0	1	6	1	0	3
Maryland	93	14	3	49	8	0	19
New Jersey	152	34	6	60	29	0	23
New York	366	105	18	142	76	0	25
Pennsylvania	256	52	25	117	31	0	31
Virginia	171	27	33	76	5	0	30
West Virginia	25	15	0	9	1	0	0
<b>Great Lakes Region--Total</b>	<b>1,389</b>	<b>466</b>	<b>61</b>	<b>591</b>	<b>103</b>	<b>0</b>	<b>168</b>
Illinois	416	140	15	157	24	0	80
Indiana	140	29	19	58	12	0	22
Michigan	229	67	6	128	13	0	15
Minnesota	174	61	5	51	30	0	27
North Dakota	10	2	0	7	0	0	1
Ohio	291	136	11	117	14	0	13
South Dakota	19	4	0	15	0	0	0
Wisconsin	110	27	5	58	10	0	10
<b>New England Region--Total</b>	<b>369</b>	<b>123</b>	<b>15</b>	<b>164</b>	<b>21</b>	<b>0</b>	<b>46</b>
Connecticut	126	51	4	43	9	0	19
Maine	34	6	1	18	3	0	6
Massachusetts	134	42	8	67	6	0	11
New Hampshire	47	19	1	18	2	0	7
Rhode Island	15	3	0	9	1	0	2
Vermont	13	2	1	9	0	0	1

**TABLE 15**  
**ESTIMATED ACTIVE WOMEN NONPILOT CERTIFICATES HELD,**  
**BY FAA REGION AND STATE**  
**DECEMBER 31, 1989 1/**

FAA Region and State	Total Nonpilot Airmen	Mechanic	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer
<b>Northwest Mountain Region--Total</b>	<b>831</b>	<b>287</b>	<b>29</b>	<b>339</b>	<b>40</b>	<b>0</b>	<b>136</b>
Colorado	275	84	1	106	14	0	70
Idaho	33	10	2	18	2	0	1
Montana	36	8	5	22	1	0	0
Oregon	93	18	10	58	3	0	4
Utah	56	18	6	20	2	0	10
Washington	318	142	3	106	16	0	51
Wyoming	20	7	2	9	2	0	0
<b>Southern Region--Total</b>	<b>1,528</b>	<b>419</b>	<b>122</b>	<b>623</b>	<b>143</b>	<b>0</b>	<b>221</b>
Alabama	142	44	6	89	1	0	2
Florida	632	196	17	253	83	0	83
Georgia	183	64	11	62	11	0	35
Kentucky	106	26	9	33	19	0	19
Mississippi	33	9	2	20	0	0	2
North Carolina	175	33	39	76	7	0	20
South Carolina	55	14	4	24	3	0	10
Tennessee	202	33	34	66	19	0	50
<b>Southwest Region--Total</b>	<b>1,096</b>	<b>431</b>	<b>48</b>	<b>451</b>	<b>69</b>	<b>0</b>	<b>97</b>
Arkansas	34	12	0	19	0	0	3
Louisiana	97	48	2	37	8	0	2
New Mexico	71	20	3	40	2	0	6
Oklahoma	213	114	8	80	2	0	9
Texas	681	237	35	275	57	0	77
<b>Western-Pacific Region--Total</b>	<b>1,693</b>	<b>682</b>	<b>54</b>	<b>650</b>	<b>114</b>	<b>0</b>	<b>183</b>
Arizona	205	62	7	98	20	0	18
California	1,374	596	45	505	72	0	156
Hawaii	68	13	0	28	17	0	10
Nevada	46	11	2	19	5	0	9
<b>Outside U. S. --Total 3/</b>	<b>128</b>	<b>15</b>	<b>5</b>	<b>64</b>	<b>28</b>	<b>1</b>	<b>15</b>
<b>Other U. S. Areas:</b>	<b>16</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>4</b>
American Samoa	0	0	0	0	0	0	0
Canal Zone	0	0	0	0	0	0	0
Guam	5	1	0	1	0	0	3
Puerto Rico	7	4	0	3	0	0	0
Virgin Island	4	1	0	2	0	0	1
Wake Island	0	0	0	0	0	0	0

1/ Data for flight engineers and flight navigators represent total active ratings held. Data for dispatchers, mechanics, parachute riggers and ground instructors represent total ratings issued to date. These ratings retain their validity.

2/ Includes Outside U. S.

3/ Outside U.S. includes Other U.S. Areas outside of the 50 states and foreign countries.

### **III. PILOT CERTIFICATES ISSUED**

**TABLE 16**  
**PILOT CERTIFICATES ISSUED, BY CATEGORY**  
**CALENDAR YEARS 1985-1989**

	1985		1986		1987		1988		1989	
Category of Certificates	Original	Additional	Original	Additional	Original	Additional	Original	Additional	Original	Additional
Pilot--Total	138,589	28,420	141,625	32,628	149,640	39,990	148,018	37,921	145,717	46,990
Student	86,060	0	88,699	0	85,611	0	86,193	0	86,193	0
Private	35,402	11,686	34,816	12,672	42,278	16,302	39,900	15,800	35,360	22,240
Commercial	8,404	7,197	8,889	9,241	11,314	11,365	12,042	10,597	13,759	11,778
Airline Transport	6,081	9,192	6,498	10,372	7,678	11,956	7,461	11,209	7,829	12,698
Helicopter (only)	2,105	207	2,209	234	2,217	293	1,947	287	2,240	252
Glider (only)	537	138	514	109	542	74	475	28	336	22

Nonpilot--Total r/	16,432	4,713	16,470	5,010	21,878	5,486	21,317	6,422	23,078	7,688
Mechanic	10,559	3,429	10,998	3,289	15,089	4,195	14,907	4,353	15,923	5,728
Parachute Rigger	157	9	149	11	194	11	142	8	167	21
Ground Instructor	1,359	343	1,386	323	1,825	366	1,716	334	2,133	399
Dispatcher	622	3	516	1	533	3	510	2	431	5
Flight Navigator	1	0	17	0	4	0	270	315	14	0
Flight Engineer	3,734	929	3,404	1,386	4,233	911	3,772	1,410	4,410	1,535
Flight Instructor										
Certificates 1/	4,298	5,921	4,628	5,421	6,327	6,378	4,898	5,234	5,365	7,532
Instrument Ratings 2/	0	11,673	0	13,688	0	18,296	0	16,810	0	20,911

(P) Preliminary

r/ Revised

Note: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot--aircraft category, class, and type instrument rating.

Helicopter pilot--instrument and type ratings.

Flight instructor--ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.

Mechanic--airframe and powerplant ratings.

Parachute rigger--senior or master rigger--senior or master rigger ratings.

Ground instructor--ratings for each subject in which the holder is qualified to give instruction.

1/ Not included in total.

2/ Special ratings shown on pilot certificates represented above; not included in total.

**TABLE 17**  
**PILOT CERTIFICATES ISSUED, BY CATEGORY AND CONDUCTOR**  
**DECEMBER 31, 1989**

Category of Certificates	Total Ratings Issued	Original Issuances				Additional Ratings			
		Total	Examiner	Inspector	No Test	Total	Examiner	Inspector	No Test
<b>Pilot--Total</b>	<b>187,608</b>	<b>145,717</b>	<b>47,190</b>	<b>86,875</b>	<b>11,652</b>	<b>41,891</b>	<b>36,771</b>	<b>1,252</b>	<b>3,868</b>
Student	86,193	86,193	0	86,193	0	0	0	0	0
Private	52,501	35,360	29,218	55	6,087	17,141	16,078	75	988
Commercial	25,537	13,759	9,839	120	3,800	11,778	9,999	117	1,662
Airline Transport	20,527	7,829	6,750	464	615	12,698	10,483	1,042	1,173
Helicopter (only)	2,492	2,240	1,072	37	1,131	252	190	18	44
Glider (only)	358	336	311	6	19	22	21	0	1

<b>Nonpilot--Total r/</b>	<b>30,766</b>	<b>23,078</b>	<b>16,965</b>	<b>541</b>	<b>5,572</b>	<b>7,688</b>	<b>4,612</b>	<b>118</b>	<b>2,958</b>
Mechanic	21,651	15,923	13,128	78	2,717	5,728	4,170	44	1,514
Parachute Rigger	188	167	114	21	32	21	15	1	5
Ground Instructor	2,532	2,133	176	13	1,944	399	40	3	356
Dispatcher	436	431	261	79	91	5	4	1	0
Flight Navigator	14	14	0	1	13	0	0	0	0
Flight Engineer	5,945	4,410	3,286	349	775	1,535	383	69	1,083
Flight Instructor									
Certificates *	12,897	5,365	3,537	1,714	114	7,532	7,058	444	30

(P) Preliminary

Note: Excludes Renewals

Note: Additional ratings are entered on current airman certificates as follows:

Private, commercial, and airline transport pilot--aircraft category, class, and type instrument rating.

Helicopter pilot--instrument and type ratings.

Flight instructor--ratings for each aircraft category in which the holder is qualified, and for instrument flying instructions.

Mechanic--airframe and powerplant ratings.

Parachute rigger--senior or master rigger--senior or master rigger ratings.

Ground instructor--ratings for each subject in which the holder is qualified to give instruction.

\* Special ratings shown on pilot certificates represented above; not included in total.



**TABLE 18**  
**INSTRUMENT RATINGS ISSUED:**  
**1989, 1988, AND 1985**

Class of Certificate	1989	1988	1985	Percent Change 1989-1988
<b>Total--All Pilots</b>	<b>20,911</b>	<b>16,810</b>	<b>11,537</b>	<b>24%</b>
<b>Private Pilots--Total</b>	<b>11,681</b>	<b>9,772</b>	<b>6,887</b>	<b>20%</b>
Private Airplane (only)	10,554	8,946	6,438	18%
Private Airplane, Private Glider	93	92	75	1%
Private Airplane, Commercial Glider	18	18	1	0%
Private Airplane, Private Helicopter	38	40	26	-5%
Private Airplane, Private Glider, Private Helicopter	3	0	0	--
Private Airplane, Commercial Helicopter	293	272	172	8%
Private Airplane, Other	682	404	175	69%
<b>Commercial Pilots--Total</b>	<b>8,091</b>	<b>6,101</b>	<b>3,493</b>	<b>33%</b>
Commercial Airplane (only)	7,122	5,267	2,751	35%
Commercial Airplane, Private Glider	54	49	29	10%
Commercial Airplane, Commercial Glider	54	41	44	32%
Commercial Airplane, Private Helicopter	12	11	1	9%
Commercial Airplane, Commercial Helicopter	843	723	646	17%
Commercial Airplane, Private Glider, Commercial Helicopter	3	3	10	0%
Commercial Airplane, Commercial Glider, Commercial Helicopter	1	6	11	-83%
Commercial Airplane, Other	2	1	1	100%
<b>Rotorcraft Pilots--Total</b>	<b>1,139</b>	<b>937</b>	<b>1,157</b>	<b>22%</b>
Commercial Helicopter	1,113	909	1,156	22%
Commercial Helicopter, Airline Transport Helicopter	17	22	0	-23%
Commercial Helicopter, Private Glider	0	0	1	--
Commercial Helicopter, Other	9	6	0	50%

**TABLE 19**  
**STUDENT CERTIFICATES ISSUED, BY MONTH:**  
**1985 - 1989**

YEAR	1985	1986	1987	1988	1989
<b>TOTAL</b>	<b>86,060</b>	<b>88,706</b>	<b>85,661</b>	<b>82,110</b>	<b>87,698 (P)</b>
January	6,414	6,641	6,098	5,410	7,789
February	5,233	5,590	6,543	6,157	7,156
March	6,809	6,472	7,125	7,133	6,833
April	7,492	7,488	7,139	6,606	6,059
May	7,749	7,415	6,164	7,014	6,870
June	8,279	8,211	8,491	8,539	8,675
July	9,249	9,648	8,973	7,796	8,305
August	8,892	8,886	8,389	8,981	8,941 (P)
September	7,973	8,961	8,109	7,624	8,004 (P)
October	7,892	8,133	7,585	7,133	7,129 (P)
November	5,579	5,809	5,912	6,086	5,134 (P)
December	4,499	5,452	5,133	3,631	6,803 (P)

(P) Preliminary